

Name \_\_\_\_\_

### **$6.022 \times 10^{23}$ ...But how much is a mole??**

**Purpose:** To understand how big a mole actually is, and to understand how small an atom actually is.

**Materials:**

- 1 (before 1982) penny
- 1 iron nail
- A piece of silicon
- A piece of lead
- Ball of aluminum foil
- A piece of carbon

**Procedure:**

1. Look at the 6 items gathered above. Make the following predictions making sure to **explain** each. Which one do you think contains the most atoms?

Do you think each item is more or less than 1 mole?

2. Determine the number of moles and the number of atoms in each item. Show your work. Record the results in a data table. (Make sure to show all of your work with units! If you need more room use the back of this paper)

3. Were your predictions correct? Why or why not?